AL.1.B91 c.2

CANADIAN

Alberta
AGRICULTURE, FOOD AND RURAL DEVELOPMENT

Special Crops Newsletter

JUL 1998

Issue 4 **July, 1998**

Special Crops Product Team

The Special Crops Product Team represents a cross-section of specialists from Alberta Agriculture, Food and Rural Development and Agriculture and Agri-Food Canada. It is a liaison between industry and government. The Team's mission is to lead departmental activities in Special Crops, consistent with industry objectives, in response to diversification, value-added and market place opportunities.

Members and phone numbers (Area code 403).

Nabi Chaudhary, Chairman - 422-4054
Stan Blade, Vice-Chairman - 415-2311
Wayne Goruk, Secretary - 427-3122
Terry Buss - 853-8240
Kris Chawla - 427-3944
Michael Clawson - 381-5843
Rudy Esau - 362-1331
Don Hansen - 422-4056
Sheau-Fang Hwang - 632-8228
Julie Kennett - 292-6745
Mafiz Khan - 422-6573
Paul LaFlamme - 538-5285
Cheryl Lockhart - 495-4143
Kathy Lowther - 556-4220
Ross McKenzie - 381-5842
Doug McMullen - 427-4249
Kirsty Piquette - 645-6301
Bob Riewe - 381-5868

In this issue...

Upcoming Event 1
Agri-Ville - An Online Farm Community 2
Company Profile - George Thacker Sons Farms 2
The Alberta Pea Network 2
Echinacea 3
Market Analysis for Special Crops 4
A New Factsheet for Coriander 5
Returns and Costs for Special Crops 6

Upcoming Event

1. Opportunities & Profits II - Special Crops into the 21st Century Conference

November 1 - 3, 1998
Convention Inn, Edmonton, Alberta

To register, contact:
Wayne Goruk
Alberta Agriculture, Food & Rural Development
306, 7000 - 113 Street
Edmonton AB Canada T6H 5T6
Tel (403) 427-3122 (dial 310-0000 first if calling long distance from Alberta)
Fax (403) 427-5921

The "Special Crops" newsletter is published four times per year. Please direct any questions, comments or suggestions for story ideas to:

Wayne Goruk, "Special Crops" Newsletter
Central Program Support
306, 7000 - 113 Street
J.G. O'Donoghue Building
Edmonton AB Canada T6H 5T6

Phone: (403) 427-3122 or
(dial 310-0000 first if calling long distance from Alberta)
Fax (403) 427-5921
e-mail: goruk@agric.gov.ab.ca

The newsletter is also available on the Internet at:

http://www.agric.gov.ab.ca/crops/special/scnews/index.html

Agri-Ville - An Online Farm Community

Agri-Ville is an on-line farm community that provides access to answers, resources and people. It is an interactive web site where farmers and ranchers come together with government and industry specialists to solve problems and to discuss new opportunities for their farm businesses.

This particular web site is a place to join in discussion when it is convenient, to try out agriculture chat sessions every Wednesday evening, to take training on-line or to do some on-line real time chats with industry or government agriculture specialists.

This site is meant for people in the agriculture business. The discussion rooms are on Farm Management, Global Marketing, Special Crops, Cereals and Oilseeds, Livestock and Beef Production. Moderators check the discussion areas and where applicable, join in with recent research results or information. In the Special Crop Discussion area, the moderators are two members of the AAFRD Special Crops Product Team - Dr. Stanford Blade of the Crop Diversification Center North and Kirsty Piquette, Pulse and Special Crop Specialist, St. Paul.

The Agri-Ville site is like attending a farm meeting with other farm members - only this time, they are not just from the local community, but the global community. Guest speakers have participated during specific nights over the winter of 1998 and more are being slated.

Speakers that have been on-line so far are Mike Leslie of Nakodo Consulting on *Market Focus in Agriculture*; Brenda Brindle, KenAgra Management (now with Alberta Grain Commission) on *Crop Market Outlook for '98*; Errol Anderson of Pro Market Communications Inc. on *Using Futures and Options as Risk Management Tools*; Dr. Stanford Blade, Crop Diversification Center North on *Insight to New Crops and their Potential for Alberta*; and Murray Hartman, Alberta Agriculture, Food and Rural Development on *Cereal and Oilseed Varieties*. Transcripts of these discussion topics are available at the site.

Agri-Ville is a pilot project with funding provided by Farm Business Management Program (FBMP) and Agri-Web Services, a division of Canadian Rural Computer Services Inc.

The address of Agri-Ville is **www.agri-ville.com**

Kirsty Piquette, BScA, A.Ag.
Pulse/Special Crop Specialist
AAFRD, St. Paul

Company Profile - George Thacker Sons Farms

We have a family owned farm and have worked from the same site since 1919. Our business has grown into a large commercial farming operation. In 1988, the company "Prairie Aromatic Natural Oils" was incorporated to establish an essential oil industry in Alberta. Today our farm produces Scotch Spearmint, Black Mitchum Peppermint, and Dillweed oils commercially. We also produce smaller volumes of several niche essential oil crops. Our latest niche crop is catnip essential oil which we market through an American Pet Toy Company.

We grow over 2,000 acres of essential oil crops each year on our farm. The production from this land is harvested and processed in our stem distillation facility. This plant is computer process controlled with several recycling systems so that the effluent contains virtually no residues from the crop oils. The final product is sold in galvanized drums. We are a wholesale marketer of these oils, only selling in larger volumes.

Our major markets are the dental hygiene, chewing gum, candy, and pickle producing companies. These markets are accessed through dealers who act as intermediaries between these companies and ourselves. We competitively bid against other farm producers and supply contracts to these firms. Small volumes of fragrance and flavour oils are sold to Europe and Japan.

Lynn, Jim or Dale Thacker
Ph: (403) 545-6566
Fax:(403) 545-6567
Bow Island, Alberta

The Alberta Pea Network

The Alberta Pea Network was initiated in 1993 through funding by the Alberta Agricultural Research Institute. The goal of the Network was to bring together all researchers and other stakeholders interested in field pea development. This group represents individuals involved

in research and extension, from the lab bench to farmers' fields. A series of summer tours and winter meetings have led to a clear vision of what the Network wishes to accomplish. A meeting in March 1997, identified a goal to reach one million acres of peas in Alberta by 2002. With 530,000 acres being seeded in 1998, we appear to be right on target.

As the acreage of pulse crops in western Canada (including Alberta) increased over the past decade, the need for research to deal with specific production problems became critical. In response to this need, there has been a strong effort by all players in the industry (provincial and federal research institutions, universities, applied research associations, private sector companies) to ensure that Alberta pulse producers have a strong competitive position due to advances in technology. Network participants have been actively involved in field pea research such as physiology, breeding, agronomy, weed/disease/insect control, harvesting methods, feeding trials, cooking quality, value-adding and marketing, which has contributed to the rapid growth of the exciting new crop in several areas. The ability to share information and coordinate projects has been one of the successful results of Network participation.

The Alberta Field Pea Network completes research that is focused on increasing net returns to farmers across the province. This group is committed to keeping those individuals involved in the development of this crop up-to-date on what is happening in all areas of research. Researchers from outside the province speak regularly at annual meetings to increase the Network's understanding of research going on outside Alberta. Previous speakers were Kevin Vessey (University of Manitoba), Fred Kraft (USDA, Presser, WA) and Perry Miller (University of Montana). In February 1997, the Network held a "Peas to Pork" workshop which focused on how Alberta-grown peas could be used more effectively as feed for rapidly expanding hog production in Alberta.

The Alberta Pea Network has brought together those groups with an interest in field peas as a crop for Alberta. Through the presentation of research results, and discussions at seminars and in the field, the Network has become more proactice in defining where the pea industry wants to be and what needs to be done to get it there.

Stan Blade, Ph.D., A.AG.
Plant Breeder/Agronomist
Alberta Agriculture, Food & Rural Development
Edmonton

Echinacea

Echinacea is currently enjoying a great deal of media coverage as a "new" medicinal plant. However, Echinacea (purple coneflower) has had a long history as a herb with curative powers. The plant produces a wide range of active compounds which are being incorporated into a variety of herbal medicines. The primary focus in this decade is on the plant's ability to act as an immune enhancer. The potential of the plant is to increase the body's resistance to microbial infections, and the tremendous interest in alternative therapies, has made it a promising component of crop diversification in Alberta.

This plant has been used for medical treatment since the late 1700s. In 1885, the Lloyd Brothers pharmaceutical company began to manufacture several Echinacea-based products as anti-infection drugs. The industry grew rapidly; in 1921 Echinacea products sold the most of any American medicinal plant. However, so many extravagant claims were made for the products that both the American Medical Association and the United States Department of Agriculture published research reports which denounced the use of these products. However, with the advent of new and effective anti-infectives in the 1930s, the interest in Echinacea-based products faded.

There is a large collection of literature on the medicinal effects of Echinacea. It is estimated that there are currently 280 products available in Germany alone. Supporters of the treatment cite research indicating Echinacea preparations stimulated the body's own defense system to increase the ingestion and destruction of invading particles.

The production of Echinacea in the field has been of interest due to the potential economic benefit of selling plant material to processors of medicine. Of course, high prices for Echinacea root indicate that the crop is not an easy one to grow. Although there is some published information on cultivation of the crop, there are also many gaps.

Echinacea thrives in well-drained soils. Optimal pH levels for such soils should range between 5.9 and 8.0. Several sources indicate that the plants do well in basic soils, and that lime may be a useful addition to land where these perennials are going to be planted. The crop is very drought tolerant, but will thrive with timely watering.

Very little information is available for Echinacea harvesting. Roots are reported in the literature to be harvestable at 3 - 4 years of age, when they have attained marketable size. Fall harvested roots have higher levels of the active ingredient and lower moisture than spring-harvested root. It is suggested that above ground plant material should be removed prior to harvest. Roots can be dug following 2 - 3 hard frosts. Harvesting can be done to a depth of 30 - 40 cm. Roots need to be washed and dried, using either forced air or placing them in an area of freely-circulating air. It is important to keep the roots out of direct sunlight, since active ingredients can be broken down by light. Forced air drying should not be done at high temperatures or over extended periods of time. Roots can be stored in dry, cool areas.

At this time, there is no information on yield expectations in Alberta. U.S. figures show herb production of 6,000, 9,000 and 12,000 kg/ha of dried herb in years 2, 3 and 4 of production. Root yields vary between species, but an average of 1,200 kg/ha has been cited in several publications.

The above-ground plant components of Echinacea are in growing demand by some processors. Removing above-ground plant organs will influence the productivity of the plant in regard to root development. Flowers can be picked (including approximately 15 cm of stem) when pollen has developed at the bottom fifth of the base of the prickly cone. Mature seeds will easily be threshed from well-dried seed heads. Removal of leafy tissue should not be done in the year of establishment, but up to 60 - 70% of the upper portion of the plant can be removed in following growing seasons. Leaves and stems can be dried in shady, outdoor areas.

It is crucial that all growers establish a secure market for their Echinacea crop prior to planting. Echinacea is currently sold in a wide variety of preparations, including tinctures, ointments, lotions, creams, fluid extracts, dry extracts, and toothpaste. There is still little clear direction regarding which species is the "best" concerning economic return. E. purpurea is easier to cultivate and dig, but harder to wash. E. angustifolia currently commands a higher price and is easier to wash, but is difficult to cultivate due to the forked taproot.

Due to the large demand, wildcrafting of the plant is no longer able to supply required material. Wildcrafting, the collection of plant material from natural areas, has been a useful source in the past. It is important to note that there are several wildcrafting guidelines which must be followed: never gather an endangered/threatened species; ensure positive identification of plants prior to harvest; ask permission from land owners; leave mature seed-producing plants within the stand; and gather sparingly only from well-established stands.

Cultivation of the crop will demand a clear understanding of who the buyers are and what quality and quantity of Echinacea they want to deal in. Some growers establish production contracts with processors and distributors prior to the season. Material should be capable of producing clean, dry, cut or milled product to buyers.

There can be a great deal of risk associated with this crop. Brokers want to be sure that they can have a continuous supply from the grower over several years. Monetary returns must be divided by the number of years that the crop is in the ground to calculate gross return per acre/year. Individuals need to be dedicated and willing to invest significant time, effort and capital.

Stan Blade, Ph.D., A.AG.
Plant Breeder/Agronomist
Alberta Agriculture, Food & Rural Development
Edmonton

Market Analysis for Special Crops

Statistics Canada estimates the national 1998 pea acreage to be 2.8 million acres of which 530,000 acres is in Alberta. This is up considerably from 1997 when Canada's acreage was 2.1 million acres and Alberta's acreage was 385,000. Despite increased Spanish demand, the abundance of feed grain in Europe and the hog cholera situation have caused exports to decrease. Also, the Asian currency crisis and the economic sanctions against India may hurt exports as these markets are vital. In recent months, the difference between the feed and edible pea market has been narrowing with

edible greens near the $5.00 per bushel mark, yellows at $4.60 per bushel and feed peas at $4.00 per bushel.

Canadian lentil acreage in 1998 is estimated near 800,000 acres with Saskatchewan accounting for over 85 percent of production. Last year's lower yields more than offset higher acreage levels to record the third consecutive year of lower production levels. Exports in 1997/98 are forecast to remain steady at about 280,000 tonnes. Current bids for No. 1 lairds and estons are near the 16 cents per pound level, while No. 1 richleas are at 15 cents per pound.

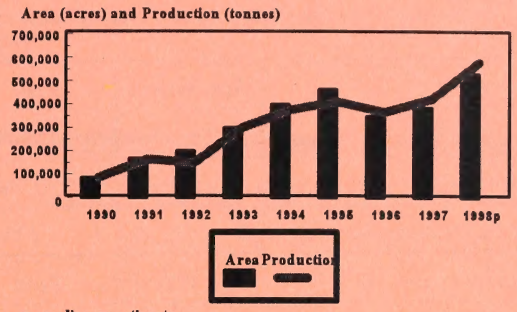
Canadian canary seed area is estimated at 420,000 acres. Traditionally, Saskatchewan produces over 80 percent of total production with Manitoba and Alberta accounting for 15 and five per cent, respectively. Current canary seed bids are near 14 cents per pound, which is about two cents per pound above this time last year.

Alberta mustard seed area is forecast at 140,000 acres. This is about 20 percent of the Canadian total. Increased exports in 1997-98 is forecast to counteract higher production. Brown and oriental mustard are currently being bid at 17 and 15 cents per pound, respectively. Bids for yellow mustard are at 18 cents per pound. This is down considerably from bids near the 30 cents per pound level last year.

Sugar beet production in Alberta is on the threshold of expansion. In 1998, sugar beets were planted on almost 42,000 acres, an increase of about 9,000 acres from 1997. Another 8,000 acres of beets are expected to be added in 1999, which will bring the total acreage to 50,000. Sugar beets are grown under contract with the sugar factory in Taber. Because of the contractual production, price for beets is negotiated between producers and the sugar factory before the crop is seeded. Although produced under contract, sugar beet price volatility is similar to other special crops. Sugar beet price per tonne has ranged from $32.10 to $43.70 from 1990 to 1996. Beet production is very labour intensive and requires highly specialized equipment.

Dry bean production in Alberta has increased more than three-fold from 1986 to 1997 (from 10,000 tonnes to 32,000 tonnes). Similarly, dry bean acreage has increased from 12,000 to 35,000 acres during the same period. Like sugar beets, almost all dry beans are grown under contract in the irrigated areas of southern Alberta. It is expected that bean production will increase

Alberta Pea Acreage and Production



significantly over the next several years to serve the two bean processing plants in Bow Island and Taber. Average producer prices for dry beans have ranged from a low of 18 cents per pound in 1987 to 30 cents per pound in 1997.

Nabi Chaudhary
Senior Economic Analyst, Crops

Don Hansen
Market Research Analyst, Special Crops
Alberta Agriculture, Food and Rural Development
Edmonton

A New Factsheet for Coriander

Coriander is an annual herb that belongs to the carrot family. Once ripe, the seeds have a sweet citrus/mint/musty aroma that has been prized for centuries. The ***Coriander*** factsheet, Agdex 147/20-2, provides information on the crop's adaptation to Alberta soil types and weather; yield and uses; seeding, fertilization, harvest and storage; weed and pest management; and, marketing. Copies of this free factsheet are available at all Alberta Agriculture, Food and Rural Development district offices or at Alberta Agriculture's Publications Office, 7000 - 113 Street, Edmonton, AB T6H 5T6.

National Library of Canada
Bibliothèque nationale du Canada
3 3286 51534 4352

Returns and Costs for Special Crops

The Production Economics and Statistics Branch of Alberta Agriculture, Food and Rural Development has released some preliminary 1997 Alberta Returns and Costs results for special crops. These are included in the table below for peas, lentils, dry beans and sugar beets. Spring wheat is included for you to compare with the special crops.

Returns	**Spr. Wheat**	**Peas**	**Lentils**	**Dry Beans**	**Sugar Beets**
Est. Avg Price	$3.75/bu.	$5.00/bu.	$0.16/lb	$0.27/lb	$45.00/tonne
Target Yield	35 bu./acre	35 bu./acre	1300 lbs/acre	2350 lbs/acre	20 tonne/acre
Gross Earnings/Acre (a)	$ 131.25	$ 175.00	$ 208.00	$ 634.50	$ 900.00
Costs (per acre)	**Spr. Wheat**	**Peas**	**Lentils**	**Dry Beans**	**Sugar Beets**
Seed	$ 9.78	$ 30.75	$ 23.38	$ 46.07	$ 45.43
Fertilizer	$ 24.37	$ 18.05	$ 8.21	$ 38.82	$ 44.04
Chemicals	$ 17.62	$ 21.38	$ 36.07	$ 77.59	$ 88.70
Hail/Crop Ins. Prem.	$ 4.20	$ 1.19	$ 3.50	$ 18.75	$ 7.18
Fuel	$ 7.41	$ 10.02	$ 13.24	$ 25.59	$ 42.69
Repairs (Mach/Bldg)	$ 12.36	$ 10.30	$ 17.23	$ 54.77	$ 81.41
Paid Labour	$ 6.57	$ 8.23	$ 9.48	$ 16.03	$ 51.25
Crop Rent/Share	$ 8.25	$ 0.00	$ 19.17	$ 3.15	$ 63.20
Taxes, H_2O rate, Ins.	$ 4.58	$ 4.67	$ 3.95	$ 31.67	$ 22.92
Other Misc.	$ 10.93	$ 7.52	$ 11.09	$ 49.22	$ 102.63
Paid Capital Int.	$ 5.11	$ 18.57	$ 10.83	$ 54.32	$ 27.29
Total Cash Cost	$ 111.88	$ 130.68	$ 156.15	$ 415.98	$ 576.74
Unpaid Labour	$ 10.54	$ 6.09	$ 7.81	$ 84.29	$ 109.77
Equip/Build Depr.	$ 23.51	$ 22.71	$ 19.95	$ 102.29	$ 107.87
Total Prod. Costs (b)	$ 145.93	$ 159.48	$ 183.91	$ 602.56	$ 794.38
Net Margin/Acre (a - b)	**$ (14.68)**	**$ 15.52**	**$ 24.09**	**$ 31.94**	**$ 105.62**

Note: The pulses nitrogen fixing abilities may contribute another $30.00 per acre to the net margin for peas and $10.00 per acre for both lentils and beans.

Digitized by the Internet Archive
in 2017 with funding from
University of Alberta Libraries

https://archive.org/details/specialcropsnews04albe